Research Department
Federal Reserve
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FRBSF Weekly Letter

The Whys of Automobile Discounts

The domestic auto industry has been in a slump for the past few years due to higher gas prices, import competition and a weak economy. In efforts to increase car sales, the industry has periodically offered incentive programs which, while successful in managing inventories, have primed consumer expectations of renewed promotional discounts. The public now reasonably expects auto companies to continue to offer price incentives until there is a significant improvement in the demand for their products.

Recently, the industry has changed the form of its promotions from rebates to subsidized credit. Finance rates, sometimes three to four percentage points below the average bank rate, are now the mechanism used to lower the effective cost of an automobile to the consumer. Since both types of promotions are equally capable of lowering costs it is an interesting question as to the rationale behind the switch. This *Letter* suggests a number of possible answers to why cheap credit was chosen. Expectations of the economy's future, a more favorable incentive structure, better current accounting profits, and the potential for increases in market share of the industry's finance corporations are possible considerations used by those responsible for the change.

Temporary discounts

Toward the end of last year, the large automakers, possibly discouraged by their rebate program, announced that there would be little or no change in the prices of new models. The unfortunate effect of the announcement was to lower the sales of 1982 model cars dramatically as the public could expect to buy a 1983 model for the same price. To combat this drop in sales, the automakers set up programs of discount financing on 1982 cars. The programs proved to be very successful and, at the beginning of 1983, the big four U.S. auto manufacturers, along with many foreign companies, extended their programs to all new cars.

In present value terms, cash rebates or low loan rates can be equivalent. The consumer is assumed to care principally about the effective price of the car, i.e., the amount of money, all things considered, that one has to pay for the automobile. For example, consider a $10,000 car that is to be financed with a 25 percent down payment. A 36-month loan at 12 percent on $7,500 will have finance charges totalling $1,470, and monthly payments of $249. In the same case, but with a loan rate of 16 percent, a rebate of roughly $400 would lead to the same monthly payments. (Because interest is tax-deductible if itemized, the two programs have potentially different tax consequences. The after-tax cost would depend on the proportion of payment counted as interest.)

But if all that matters is the effective price, why not just lower the list price instead of using either of these two types of discounts? Part of the answer is that both the consumer and the firm base their decisions on expectations of future events. Reduction in the list price (as opposed to rebates) could lead the public to expect additional price cutting and cause consumers to defer their purchases. During the 1978-80 surge in inflation, consumers used the experience of rising prices to anticipate continued inflation. They tended to adopt a buy-now strategy out of fear that they would not be able to afford the purchase later on. This reaction may even have been strong enough to generate further inflationary momentum.

The story in reverse could be told if the sticker prices of cars were to decline. The rational consumer might believe that prices will drop further and postpone any purchases. For the auto industry, such consumer behavior in the aggregate would only

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increase the pressure for further price cuts. Thus, maintaining stable list prices while using temporary discounts to encourage sales is one way for the industry to wait out its slump.

Changing the risks

Rebates filled the role of a temporary price discount until recently when firms began to offer financing at rates substantially below those of banks. The choice may partly be related to the industry's expectations of the economy's future. If it believes that the demand for cars will increase *and* that interest rates will decline, then it may try to profit by gambling against the maturity structure of interest rates.

The low finance-rate programs usually require the purchaser to use a finance corporation wholly owned by the auto company. The healthier of these finance companies are able to bypass banks and obtain funds directly in the capital markets. Theoretically they can acquire short-term funds through instruments such as commercial paper and then, by mismatching the maturities of their assets and liabilities, benefit from falling rates in the three or four years during which the customer pays back his fixed-rate loan.

Such programs accentuate the risk for the industry of a change in interest rates. A rise in interest rates would not only increase the costs of this promotion over the next few years, it would also hurt car sales when the promotion ends. On the other hand, a drop in rates that increases the demand for cars would be more profitable over time as the industry sells more cars while funding previous promotions with cheaper borrowing.

Current earnings

The industry may also be trying to lessen the effects discounts have on current earnings. Below-market loans and other long-lasting discount schemes, such as extended warranties, tend to spread the costs of discounts over a number of years. When the duration of warranty protection is extended, the cost to the consumer of owning the car is lowered while the cost to the company of selling the car is increased. However, the company's cost is spread out over the term of the below-market loan or the additional warranty period and neither falls in the current accounting period nor is directly observable. Thus, the industry's *current* earnings do not suffer the sharp drop that occurs when the full discount is given up front, as is the case with rebates.

In theory, smoother accounting profits from subsidized credit will not fool the capital market when it values equity or debt issues. Nevertheless, the widespread efforts of corporations to raise accounting earnings during economic slumps suggest that the effect on current earnings may be an additional reason for the switch from rebates to subsidized financing.

Incentive structures

In general, rebates were applied to the base cost of selected models and increased in step-wise fashion without consideration of the options chosen. The use of subsidized credit, however, alters the incentive structure by lowering costs at the margin for the consumer who is thinking of adding options. This can work to the advantage of the car manufacturer, even though the dollar value of the discount increases with the purchasing price, because the industry uses a much greater mark-up over costs for options than they do for the basic model. The profit on a sale is therefore directly related to the number of options included. If this new incentive is successful in increasing the sale of cars with more options, then the industry will most likely benefit more from discount financing than from rebates.

Marketing of auto finance corporations

It is also possible that, in addition to selling more cars, discount financing will increase the market share of finance corporations owned by the auto manufacturers and thereby enable them to be more profitable

subsidiaries at market-determined rates in the future.

Not too many years ago, the market for auto loans was dominated by commercial banks. But, as seen in Chart I, the banks' market share has narrowed recently. At the end of 1978, banks had three times as much outstanding consumer credit as finance companies, a difference of $40 billion. By the end of 1982, the differences had shrunk; banks were still ahead, but at only $59 billion to $49 billion. (Unfortunately, the data do not distinguish among types of finance companies. Still, indications are that the car loan market is strongly dominated by auto company finance corporations.) From Chart II, which uses the average bank car loan rate for comparison, it is apparent that auto-owned finance corporations have been aggressive in pricing their loans even during periods without low finance-rate promotions.

Auto company finance corporations have, in the past, seemed to exist mainly to prevent credit shortages from hurting sales. Now, during difficult times, car manufacturers are looking to increase the earnings potential of all their various operations. The offering of relatively cheap credit serves an auxiliary function as a promotional scheme to increase the market share of their finance corporations in competition with commercial banks.

Even when not offering promotions, auto companies have certain advantages in the auto loan market. The marginal costs of running such operations is minimal, while their ability to sell repossessed cars means they can recover more of the value of a bad loan than can other institutions. They therefore face less risk in making a loan. Furthermore, cheap credit attracts people to an auto company finance corporation, and allows these corporations to sell the public on the quality of their service. It creates the potential for auto buyers to return in the future when the promotion is long over and rates fall back into line with the market.

Conclusion

The auto industry has struggled for the last few years to cut costs and improve its products while waiting for an upswing in the demand for cars. In the interim, they have had to resort to discounts in order to maintain sales. This *Letter* has looked at why cheap credit rather than rebates might be a more desirable form of discount from the industry's perspective. For instance, in theory, discounts of low finance rates given in January are now costing auto companies less than rebates would have because of the drop in interest rates. The course of events has so far made using low finance rates appear a wise choice.

Tom Klitgaard

Chart I
OUTSTANDING AUTO LOANS

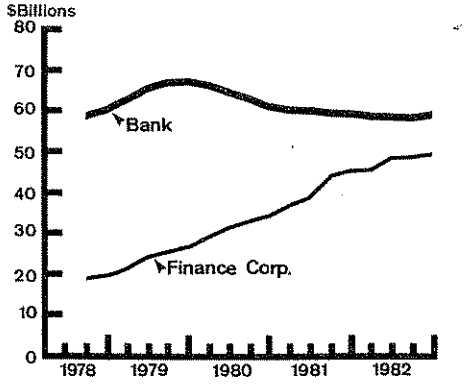
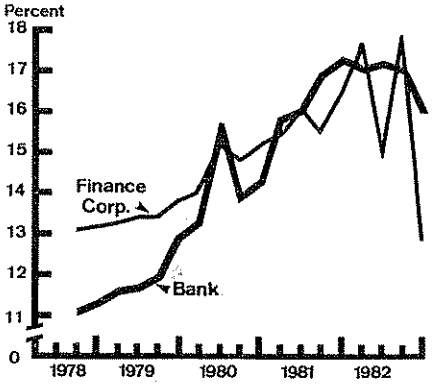


Chart II
FINANCE RATES



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BANKING DATA—TWELFTH FEDERAL RESERVE DISTRICT

(Dollar amounts in millions)

Selected Assets and Liabilities Large Commercial Banks	Amount Outstanding 3/30/83	Change from 3/23/83	Change from year ago Dollar	Change from year ago Percent
Loans (gross, adjusted) and investments*	163,185	470	4,395	2.8
Loans (gross, adjusted) — total#	142,089	429	4,626	3.4
Commercial and industrial	45,163	97	1,920	4.4
Real estate	57,146	– 89	280	0.5
Loans to individuals	23,456	53	262	1.1
Securities loans	2,021	129	371	22.5
U.S. Treasury securities*	8,137	41	1,943	31.4
Other securities*	12,958	0	– 2,174	– 14.4
Demand deposits — total#	40,039	1,627	– 468	– 1.2
Demand deposits — adjusted	28,211	1,110	266	1.0
Savings deposits — total	65,273	187	34,061	109.1
Time deposits — total#	67,894	– 377	– 23,623	– 25.8
Individuals, part. & corp.	60,507	– 223	– 21,836	– 26.5
(Large negotiable CD's)	21,235	– 314	– 12,900	– 37.8
Weekly Averages of Daily Figures	Week ended 3/30/83	Week ended 3/23/83	Comparable year-ago period	
Member Bank Reserve Position				
Excess Reserves (+)/Deficiency (–)	*88	107	95	
Borrowings	67	31	103	
Net free reserves (+)/Net borrowed(–)	21	76	– 7	

* Excludes trading account securities.

Includes items not shown separately.

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